Algebra 2 - Absolute Value Problem Set

Stasya

1. In a cheerleading competition, the minimum length of a routine is 4 minutes. The maximum length of a routine is 5 minutes. Write an absolute value equation that represents the minimum and maximum lengths.

2. Find the equation of $g(x)$ when $f(x) = |x + 3| - 2$ is reflected over the x-axis, shifted right 9 units, and up 5 units.

3. For what values x is $\frac{|2x+7|}{3} \geq -1$?

4. Solve $-\frac{1}{2}|4 - 3x| = 6$.

5. A box of cereal is supposed to weigh 13.8 ounces, but it's unacceptable for the weight to vary more than 0.5 ounces. Write and solve an absolute value inequality to find the range of unacceptable weights.

6. Identify all transformations in this function: $f(x) = -\frac{1}{6}|x + 5| + 12$.